

Windmüller & Hölscher KG
Münsterstraße 50
49525 Lengerich/Westfalen

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Mandrel-Locking Unit For Print Roller Mandrels In A
Rotary Printing Machine

Claims

1. Mandrel-locking unit (1) for a rotary printing machine with

- a mandrel-mounting element (9) that forms a hollow body and accommodates in an enclosed form in its interior a bearing (11) for mounting a print roller mandrel (13) having a mandrel-supporting surface (12) and that can be slid between a mounting position in which the print roller mandrel (13) is in mesh with the bearing (11) and a release position in which the print roller mandrel (13) is out of mesh with the bearing (11),
- a pressurizing medium cylinder (2) comprising a pressure chamber (3) and a piston (4) located inside it for sliding the mandrel-mounting element (9) between the mounting position and the release position, where the piston (4) delimits the pressure chamber (3) at a boundary surface and is connected to the mandrel-mounting element (9) at a connecting point for the transfer of the force required for sliding the mandrel-mounting element,

characterized in

- that the distance between the boundary surface and the connecting point is smaller than the maximum stroke of the piston (4) in the pressurizing medium cylinder (2),
- that the pressurizing medium cylinder (2) comprises a break-through (14) that is open in the release position of the mandrel-mounting element (9) so that the print roller mandrel (13) and the mandrel-locking unit (1) can be separated from one another by a movement in relation to one another.

2. Mandrel-locking unit (1) pursuant to claim 1
characterized in that
the distance between the boundary surface and the connecting point is smaller than three quarters of the maximum stroke of the piston (4) in the pressurizing medium cylinder (2).
3. Mandrel-locking unit (1) pursuant to any of the aforementioned claims
characterized in that
the distance between the boundary surface and the connecting point is smaller than half of the maximum stroke of the piston (4) in the pressurizing medium cylinder (2).
4. Mandrel locking unit (1) pursuant to any of the aforementioned claims
characterized in that
the inner diameter of the pressurizing medium cylinder (2) is larger than the outer diameter of the mandrel-mounting element (9).
5. Mandrel locking unit (1) pursuant to any of the aforementioned claims
characterized in that
parts of the mandrel-mounting element (9) can be displaced into the pressurizing medium cylinder (2).
6. Mandrel locking unit (1) pursuant to any of the aforementioned claims
characterized in that
the piston (4) is a disk without a piston rod.
7. Mandrel locking unit (1) pursuant to any of the aforementioned claims
characterized in that
the connecting point between the piston (4) and the mandrel-mounting element (9) has a screwed connection.
8. Mandrel locking unit (1) pursuant to any of the aforementioned claims
characterized in that
the mandrel mounting element (9) and the pressurizing medium cylinder (2) are

shaped as circular cylinders and that their axes of symmetry extend parallel to the distance between one another.